REMARKS

Claims 1-6, 14,. 20, 21, 23-32, 42-48, 86, 88, and 91 are pending in the present application. Claims 1-6, 14-32, 41-48, 86, 88, and 91 were presented for Examination. Claims 15-19, 22, and 41 were cancelled by amendment.

In the office action mailed January 9, 2007 (the "Office Action"), the Examiner rejected claims 1-6, 14-32, and 41-48 under 35 U.S.C. 101 and further rejected claims 41-48 and 88 under 35 U.S.C. 112, first paragraph. Claims 1-6, 14-28 41-48, 86, and 91 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,731,301 to Sato et al. (the "Sato patent"). Claims 29-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over the Sato patent in view of U.S. Patent No. 6,501,483 to Wong et al.

With respect to the Examiner's rejection of claims 1-6, 14-32, and 41-48 under 35 U.S.C. 101, it is not the case that claim 1 is a computer program *per se*, as suggested by the Examiner. See the Office Action at page 5. It is well known that methods can be implemented in hardware, such as programmable logic arrays and the like. Consequently, claims 1-6, 14-32, and 41-48 are not limited as argued by the Examiner. The Examiner further mischaracterizes the claims as failing to recite either a physical transformation or producing a useful and tangible result. See id. On the contrary, each of the claims recite producing a useful and tangible result. For example, claims 1-6 recite determining a value for at least one pixel of the image by combining the sample values calculated for the sampling locations for the pixel. The value that is determined represents the useful result in producing the image. Similarly, claims 14-21 recite calculating a value for at least one pixel of the image from a respective pair or pairs of calculated sample values. The useful result is the value for a pixel that is used in producing the image. The remaining rejected claims similarly recite producing useful and tangible results. For the foregoing reasons, the rejection of claims 1-6, 14-32, and 41-48 under 35 U.S.C. 101 should be withdrawn.

With respect to the Examiner's rejection of claims 41-48 and 88 under 35 U.S.C. 112, first paragraph, the Examiner is mistaken that the present application fails to disclose the combination of limitations of claims 41-48 and 88. The Examiner has failed to take the description of the present application as a whole. Figures 5a, 5b, 8, and 9, and the description found at page 11, line 15-page 12, line 12 and page 13, line 11-page 15, line 13, describe

sampling patterns having two sample locations (e.g., shown in Figures 5a and 5b) corresponding to two of four candidate sample locations (e.g., shown in Figures 8 and 9). As shown, a pixel can be sub-divided into 16 sub-locations. In the case of Figures 5a and 5b, two sample locations are located in two of the 16 sub-locations. For example, with respect to sampling pattern for pixel 704a, the two sample locations correspond to locations (3, 1) and (0, 2). These two locations correspond to two of four sub-locations that are candidate positions for the sampling patterns shown in Figures 8 and 9. For example, turning to Figure 9 and specifically with respect to pixel 508, the four candidate sample locations are (0, 1), (3, 1), (0, 2), and (2, 3). As previously discussed, the sampling pattern for pixel 704a includes sample locations at (3, 1) and (0, 2), which correspond to two of the four candidate sample locations of pixel 508. Figures 5a, 5b, 8, and 9, and the related description sufficiently convey to one ordinarily skilled in the art that Applicants were in possession of the claimed invention at the time the present application was filed. Additionally, rejected claim 42 included the offending limitations as originally filed. Thus recognition of the claimed invention at the time of filing is clearly demonstrated. Therefore, the rejection of claims 41-48 and 88 under 35 U.S.C. 112, first paragraph, should be withdrawn.

The Examiner has further rejected claims 1-6, 14-28, 41-48, 86 and 91 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,731,301 to Sato et al. (the "Sato patent").

Claims 1, 14, 23, 27, 42, 86, and 91 are patentably distinct from the Sato patent because the Sato patent fails to disclose the combination of limitations recited by the respective claims. For example, with reference to claims 1, 14 and 86, the Sato patent fails to teach first and second sampling patterns where the second sampling pattern corresponds to the first sampling pattern rotated by 90 degrees. The Examiner argues that the Sato patent discloses alternative sampling patterns with sample positions rotated 90 degrees in Figures 26, 29, 34, 36, and 38, and the description at col. 2, 4, 8-10, 11-12, and 13-14. The Examiner is incorrect, however, that Sato discloses such sampling patterns. For example, Figures 26, 29, 34, 36, and 38 illustrate sampling patterns that are rotated 180 degrees relative to one another per pixel. The description corresponding to the Figures also fails to teach or suggest having alternative sampling patterns that are rotated 90 degrees relative to one another.

With respect to claims 23, 27, and 91, the Sato patent fails to at least disclose calculating sample values for pixels of the image in accordance with a plurality of sampling rates, the sampling rate defined by the number of samples per pixel and at least one sample per pixel, the sampling rate differing for at least two pixels of the image. The Examiner argues that Figures 26-34 discloses variable sampling rates. However, as recited in claims 23, 27, 91, at least one sample is taken per pixel of the image. Thus, with specific reference to the Examiner's argument that Figure 32 shows two sampling rates for pixels along the y-axis, the Sato patent does not disclose taking at least one sample per image and having variable sampling rates.

With respect to claim 42, the Sato patent fails to at least disclose calculating sample values for pixels of the image in accordance with a sampling pattern, the region of potential sampling locations relative to a pixel considered as divided evenly into a four-by-four array of sub-regions, the sampling pattern having only two sample locations relative to a pixel, each sample location located at one of four candidate sampling locations, and the candidate sampling locations arranged in a manner whereby no two of the four candidate sample locations for a given sampling pattern are located along the same row, column, or diagonal of sub-regions. The Examiner argues that Figures 26, 29, 34, 36, and 38, and the description at col. 2, 4, 8, 11-12, and 13-14 teach the arrangement of candidate sample locations as recited in claim 42. However, reviewing the cited Figures and description do not reveal any disclosure of the claimed limitation. All of the cited Figures illustrate sparse sample locations that are located along the same row, column, or diagonal of the 16 possible sample locations per pixel. For example, with reference to Figure 26, although the four samples are not located along the same row or column, multiple sample locations are located along a common diagonal. The same can be said regarding the sample locations shown in Figures 29, 34, 36, and 38.

For the foregoing reasons, claims 1, 14, 23, 27, 42, 86, and 91 are patentably distinct from the Sato patent and the rejection of these claims under 35 U.S.C. 102(e) should be withdrawn. Claims 2-6 which depend from claim 1, claims 20 and 21, which depend from claim 14, claims 24-26, which depend from claim 23, claims 28-32, which depend from claim 27, claims 43-48, which depend from claim 42, and claim 88, which depends from claim 86, are similarly patentably distinct from the Sato patent based on their dependency from a respective

allowable base claim. Therefore, the rejection of the dependent claims under 35 U.S.C. 102(e) and 35 U.S.C. 103(a) should withdrawn.

All of the claims pending in the present application are in condition for allowance. Favorable consideration and a timely Notice of Allowance are earnestly solicited.

Respectfully submitted,

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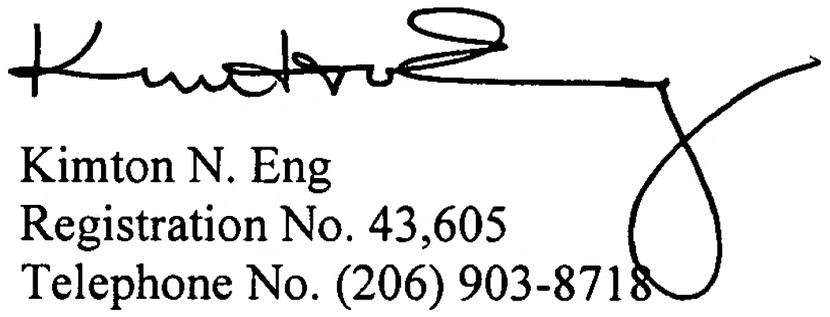

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